

Remarks/Arguments

This application has been reviewed in light of the Office Action of October 1, 2004. Claims 1, 3-6 and 8-11 are pending in the application. No new matter has been added. The Examiner's reconsideration of the rejection in view of the amendment and the following remarks is respectfully requested.

By the Office Action, the Examiner objected to the specification for minor informalities. The specification has been amended to state an array of anodes. Reconsideration is respectfully requested.

By the Office Action, claims 1, 3-5 and 9-11 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 5,580,142 to Kurematsu et al. (hereinafter Kurematsu) in view of U.S. Patent No. 5,804,919 to Jacobsen et al. (hereinafter Jacobsen) and further in view of U.S. Patent No. 6,661,475 to Stahl et al. (hereinafter Stahl).

The Applicants respectfully disagree with the rejection.

The Examiner stated that Kurematsu and Jacobsen fail to disclose or suggest a LCOS imager, but that Stahl should be combined with Kurematsu and Jacobsen since Stahl teaches using a LCOS imager. The Applicant disagrees. One skilled in the art would not be motivated to combine Stahl with Kurematsu and Jacobsen without knowledge of the present invention's novel combination. The cited combination of references does not fairly teach or suggest that the novel combination of elements, namely a LCOS images and a field emission device (FED) light source producing a single color light can be properly combined.

Considering the references one at a time, Kurematsu provides a projection system with colored bulbs (e.g., a metal halide lamp), and light valves 1, 2 and 3 are employed to form color images, as stated correctly by the Examiner. However LCOS imagers are not

disclosed or suggested by Kurematsu. Instead, Kurematsu employs a lamp bulb, which teaches away from the present invention, which seeks to eliminate the usage of a lamp bulb. In addition, Kurematsu does not disclose or suggest the use of a microcavity emitter light source also as stated by the Examiner.

Jacobsen includes a field emission device with a microcavity emitter, which provides an image output as a display. While Jacobsen does disclose a single light source for projection displays at col. 20 lines 60-62, Jacobsen fails to disclose or suggest an illumination source for a LCOS projection system, and further fails to disclose or suggest that the array of anodes is arranged so that a single color light is projected through a LCOS device to produce the image of the selected color.

Therefore, Kurematsu and Jacobsen are silent as to the use of a LCOS imager for producing an image of a single color. To cure this deficiency the Examiner cites Stahl.

Stahl uses a prior art lamp to provide light to LCOS devices. Stahl suffers from the drawbacks of using a lamp bulb 28 and a plurality of splitters, reflectors and filters to provide images. One skilled in the art would not combine the LCOS imager of Stahl with the display device of Jacobsen without first having knowledge of the inventive combination set forth in the present claims. Nothing in Stahl suggests any deficiency or problem with the lamp bulb setup set forth therein. This is no suggestion in Stahl of a microcavity emitter or any alternate source of light.

The present invention advantageously provides the microcavity emitters as a light source for LCOS technology imagers to produce a new device, which does not suffer from the drawbacks of arc lamps of the prior art, as set forth in Kurematsu and Stahl.

Claim 1, recites, *inter alia*, a projection type display unit having a LCOS imager defining a plurality of controllable pixels, a light source for exclusively generating light of a

single selected color, said light source arranged for transmitting said light through said imager to produce an image of the selected color; and a projector lens ... wherein said light source is comprised of a field emission device exciting a resonant microcavity anode with an active region, said active region having a phosphor disposed therein for emitting light of said selected color.

Claim 9 includes, *inter alia*, exciting an array of resonant microcavities configured for exclusively emitting light of a single selected color, and projecting said light through a LCOS imager defining a plurality of controllable pixels to produce an image in the single selected color.

Independent claims 1 and 9 includes the recited the combination of a LCOS images and a field emission device.

As stated above, the proper motivation for combining the cited references to arrive at the present invention is lacking. The combination of a LCOS imager and a field emission device source are not disclosed or suggested by the cited combination of references. Since proper motivation is lacking absent the use of impermissible hindsight, the present invention taken as a whole is not properly taught by the cited combination. The present invention provides a combination of elements not taught or suggested in the prior art, e.g., a LCOS imager and a field emission light source. In order for the cited combination of references to be properly combined, there must be some explicit motivation or suggestion for combining at least these two elements.

Therefore, since Kurematsu and Jacobsen fail to disclose or suggest a LCOS imager and Stahl fails to disclose or suggest a field emission device, and no motivation is provided for combining Stahl with the other references. Proper motivation to combine the references is lacking, and the rejection is improper. Claims 1 and 9 and claims dependent

therefrom are believed to be in condition for allowance for at least the reasons stated.

Reconsideration of the rejection is earnestly solicited.

By the Office Action, claims 6 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over in view of Jacobsen and further in view of Stahl. The Applicant respectfully disagrees with the rejection.

Claim 6 recites, *inter alia*, an illumination source for a LCOS projection system, including an array of resonant microcavity anodes on a second side on the vacuum cavity for generating light of a selected color, the array being arranged so that said light is projected through a LCOS device to produce the image of the selected color wherein said field emission display points are electron emitters used to excite the array of resonant microcavity anodes to exclusively generate light of said selected color to create an image using only the selected color.

Claim 6 includes the recited the combination of a LCOS images and a field emission device. Therefore, the arguments set forth above for claims 1 and 9 are applicable to claim 6.

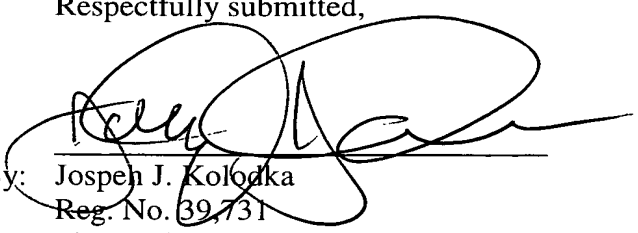
Since the combination lacks proper motivation to combine the references, claims 6 and 8 are believed to be in condition for allowance for at least the reasons stated.

Reconsideration of the rejections is earnestly solicited.

In view of the foregoing amendments and remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

No fee is believed due. However, if a fee is due, please charge the additional fee to
Deposit Account 07-0832.

Respectfully submitted,


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